

REMARKS

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 19 through 28 are pending. In this Amendment, claims 1, 5, 6, and 12, through 18 are canceled and claims 19 through 28 are added. Claims 2, 3, 4, 7, 8, 9, 10, and 11 were previously cancelled. No new matter is added.

Support for new claims 19 through 28 is found in the originally filed specification and drawings, and in particular in Figure 2.

The Examiner is thanked for indicating a possible way to overcome the rejection under 35 U.S.C. § 103 by using such language as ‘consecutive electrodes are positioned to define a non-uniform density.’ The spirit of this language is incorporated into the newly presented claims.

Claims 13 through 18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claims have been cancelled in this amendment. Thus, this rejection is now moot.

Claims 1, 5, 6, 12, 14 and 16-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,304,787 to Kuzma *et al.*, hereinafter referred to as “Kuzma *et al.*” These specific claims have been cancelled, and the rejection is respectfully traversed with respect to the new claims presented in this amendment.

Claims 19, 22, and 28 state in part, **said at least four consecutive electrodes are positioned such that any two consecutive electrodes of said four consecutive electrodes have a different distance between them than any one other pair of said four consecutive electrodes.** Claim 25 clearly defines these distances. However, Kuzma *et al.* describes an electrode array with evenly spaced consecutive electrodes. Any electrode array with electrodes positioned as taught by Kuzma *et al.* would have the same electrode spacing over any four consecutive electrodes. Kuzma *et al.* therefore does not meet the

claimed limitation of having four consecutive electrodes creating a non-uniform spacing/density, and therefore, claims 19, 22, 25 and 28 are patentable over Kuzma *et al.*

Claims 20 through 21 depend directly or indirectly from claim 19, and, accordingly, include all of the patentable features of claim 19 as well as other patentable features. Claims 23 through 24 depend directly or indirectly from claim 22, and, accordingly, include all of the patentable features of claim 22 as well as other patentable features. Claims 26 through 27 depend directly or indirectly from claim 25, and, accordingly, include all of the patentable features of claim 25 as well as other patentable features. Therefore, claims 20 through 21, 23 through 24, and 26 through 27 are patentable over Kuzma *et al.* for at least the reasons discussed above with respect to claims 19, 22, and 25.

Claims 1, 5, 6, and 12 through 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hochmair-Desoyer *et al.* (“An eight Channel Scala Tympani Electrode for Auditory Prostheses”), hereinafter referred to as “Hochmair-Desoyer *et al.*” The claims have been cancelled, and the rejection is respectfully traversed with respect to the new claims presented in this amendment.

Claims 19, 22, and 28 state in part, **said at least four consecutive electrodes are positioned such that any two consecutive electrodes of said four consecutive electrodes have a different distance between them than any one other pair of said four consecutive electrodes.** Claim 25 clearly defines these distances. However, Hochmair-Desoyer *et al.* describes an electrode array with the distance between consecutive electrodes alternating between 1.5 mm and 0.5 mm. Any four consecutive electrodes under Hochmair-Desoyer *et al.* would be separated by 1.5 mm, 0.5 mm and 1.5 mm. Since these distances never vary, the electrode density remains the same over all groups of four consecutive electrodes. Therefore, Hochmair-Desoyer *et al.* does not meet the claimed limitation of having four consecutive electrodes having different distances between them.

Also, although Hochmair-Desoyer *et al.* mentions on page 45 that an individual electrode should be as close to excitable nerve structures as possible, Applicant

respectfully suggests that the portion of Hochmair-Desoyer *et al.* at issue does not relate to positioning of multiple electrodes, but refers instead to the shape of an individual electrode. For at least this reason, claims 19, 22, 25, and 28 are patentable over Hochmair-Desoyer *et al.*

In addition, with respect to claims 1, 5, 6, and 12 through 18, these claims have been rejected on the basis of facts within the personal knowledge of the Examiner. Accordingly, under 37 C.F.R. § 1.104(d)(2) the Applicants hereby request that the Examiner provide an affidavit supporting the Examiner's assertion used as a basis for this rejection.

Claims 20 through 21 depend directly or indirectly from claim 19, and, accordingly, include all of the patentable features of claim 19 as well as other patentable features. Claims 23 through 24 depend directly or indirectly from claim 22, and, accordingly, include all of the patentable features of claim 22 as well as other patentable features. Claims 26 through 27 depend directly or indirectly from claim 25, and, accordingly, include all of the patentable features of claim 25 as well as other patentable features. Therefore, claims 20 through 21, 23 through 24, and 26 through 27 are patentable over Hochmair-Desoyer *et al.* for at least the reasons discussed above with respect to claims 19, 22, and 25.

Claims 1, 5, 6 and 12-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,284,856 to Hochmair *et al.* (hereinafter "Hochmair *et al.*") Those claims have been cancelled, and this rejection is respectfully traversed with respect to the new claims presented in this amendment.

Claims 19, 22, and 28 state in part, **said at least four consecutive electrodes are positioned such that any two consecutive electrodes of said four consecutive electrodes have a different distance between them than any one other pair of said four consecutive electrodes.** Claim 25 clearly defines these distances. As admitted in the Office Action on page 4, Hochmair *et al.* does not teach how electrodes are spaced on an electrode array. The Office Action cites no description or drawing in Hochmair *et al.* that shows how many electrodes or what configuration of electrodes should be most effectively

positioned. Further, Hochmair *et al.* does not teach what specific goal is sought (*i.e.* speech recognition, filtering out ambient noise, *etc.*) and therefore cannot teach or suggest a way to configure the electrodes to more efficiently detect certain frequencies or other potential goals. Since Hochmair *et al.* does not teach many of the details that would determine electrode positioning, routine experimentation could not determine appropriate spacing of electrodes, and Hochmair *et al.* cannot teach nor suggest any particular electrode positioning.

These claims have been rejected on the basis of facts within the personal knowledge of the Examiner. Accordingly, under 37 C.F.R. § 1.104(d)(2) the Applicants hereby request that the Examiner provide an affidavit supporting the Examiner's assertion used as a basis for this rejection.

Furthermore, Hochmair *et al.* teaches that each sound heard should be transmitted to the region of the cochlea matching the frequency response (column 5, line 46 and column 10, line 3). Figure 6 shows a range of frequency responses from 20,000 down to 100. Hochmair *et al.* therefore suggests a uniform spacing of electrodes, as the detected signal could correspond in frequency to any region of the cochlea, and does not teach or suggest that any particular region is more desired than any other region.

For at least the reasons stated above, claims 19, 22, 25, and 28 are patentable over Hochmair *et al.*

Claims 20 through 21 depend directly or indirectly from claim 19, and, accordingly, include all of the patentable features of claim 19 as well as other patentable features. Claims 23 through 24 depend directly or indirectly from claim 22, and, accordingly, include all of the patentable features of claim 22 as well as other patentable features. Claims 26 through 27 depend directly or indirectly from claim 25, and, accordingly, include all of the patentable features of claim 25 as well as other patentable features. Therefore, claims 20 through 21, 23 through 24, and 26 through 27 are patentable over Hochmair *et al.* for at least the reasons discussed above with respect to claims 19, 22, and 25.

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Ajay A. Jagtiani at 703-591-2664, Ext. 2001.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,



Ajay A. Jagtiani
Reg. No. 35,205

JAGTIANI + GUTTAG
Democracy Square Business Center
10363-A Democracy Lane
Fairfax, Virginia 22030
703-591-2664

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